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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,361	04/28/2000	GUIDO MORUZZI	027650-857	5394

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EXAMINER

CHORBAJI, MONZER R

ART UNIT PAPER NUMBER

1744

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary

Application No.

09/530,361

Applicant(s)

MORUZZI, GUIDO

Examiner

MONZER R CHORBAJI

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6, 15, 17, 18 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6, 15, 17, 18 and 21-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>04/16/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This non-final office action is in response to the amendment received on 01/20/2004

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5, 17, 21, 23, and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by DiGeronimo (U.S.P.N. 4,494,357).

With respect to claims 5, 21, 23, and 26, DiGeronimo teaches a method and an apparatus (abstract and figure 2) for sterilizing a packaging sheet material including the following: applying hydrogen peroxide solution (col.4, tables 2-3 and figure 2, 36), a drying step (figure 2, 40), a UV irradiation step (figure 2, 42) having a wavelength between about 200 nm and 320 nm (col.6, lines 43-45), air heated to a temperature from 80 degrees Centigrade to 150 degrees Centigrade (col.3, lines 13-14), and means for advancing the packaging material (figure 2, 32 and the arrows). In addition, DiGeronimo recognizes the presence of microorganisms on the surfaces of the web (col.2, 10-13) and the need to sterilizing such surfaces. Thus, it is credible to believe that the microorganism present on the surfaces of the web in the DiGeronimo reference absorbs the residual hydrogen peroxide left after the step of drying since the specification only teaches of microorganisms as well without specifying any significance.

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With respect to claims 17 and 25, DiGeronimo teaches the use of lamp producing UV light source having a wavelength between about 200 nm and 320 nm (col.6, lines 43-45) and applying a stream of air heated to a temperature of between 80 degrees Centigrade to 150 degrees Centigrade (col.3, lines 13-14).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 2-3, 15, 22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiGeronimo (U.S.P.N. 4,494,357).

With respect to claim 15, even though DiGeronimo does not provide a range value for the depth of the hydrogen peroxide bath, it is credible to believe that the depth of such a bath depends on the dimensions of the thickness of the packaging material, i.e., very thick laminates require a deeper bath.

With respect to claim 22, even though DiGeronimo does not explicitly disclose a unit for concentration such as percent by weight for hydrogen peroxide, choosing a specific concentration unit is a matter of choice of an artisan that depends on the degree of easiness in converting such a unit to another units, i.e., SI system and the British system for units.

With respect to claims 2-3 and 24, such a feature has already been addressed with regard to claim 22.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over DiGeronimo (U.S.P.N. 4,494,357) in view of Loliger et al (U.S.P.N. 3,692,468).

The teachings of DiGeronimo have previously been set forth with regard to claims 5, 17, 21, 23, and 25-26. However, with respect to claim 4, DiGeronimo discloses various time intervals for immersion of the packaging material in the bath (col.3, lines 11-12 and col.4, lines 29-31), but fails to teach the specific time interval as disclosed in claim 4. Loliger et al teaches that it is known to immerse a packaging material for even a lesser time (col.1, lines 30-33 and col.3, lines 66-71). Thus, it would have been obvious to one having ordinary skill in the art to modify the method of DiGeronimo by shortening the time interval for immersion in order to insure that no germ come in contact with the emerging strip to prevent recontamination of the packaging material (Loliger et al, col.3, lines 66-73).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over DiGeronimo (U.S.P.N. 4,494,357) in view of Lagunas-Solare et al (U.S.P.N. 5,364,645).

The teachings of DiGeronimo have previously been set forth with regard to claims 5, 17, 21, 23, and 25-26. However, with respect to claim 6, DiGeronimo fails to disclose the use of polychromatic UV light source. Lagunas-Solare et al teaches that it is known to use Polychromatic UV light for surface microbial disinfection (col.1, lines 38-41). Thus, it would have been obvious to one having ordinary skill in the art to modify method of DiGeronimo to include a polychromatic UV light source since such a source is known to be effective in surface microbial disinfection (col.1, lines 51-52 and lines 9-11).

7. Claims 18 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiGeronimo (U.S.P.N. 4,494,357) in view of Castberg et al (U.S.P.N. 5,744,094). The teachings of DiGeronimo have previously been set forth with regard to claims 5, 17, 21, 23, and 25-26. However, with respect to claims 18 and 27, DiGeronimo fails to disclose the use of an excimer lamp. Castberg et al discloses that it known to use an excimer lamp (col.2, lines 36-38). Thus, it would have been obvious to one having ordinary skill in the art to modify the apparatus of DiGeronimo to include an excimer lamp since the geometry of the beam may be altered in response to changes in fluid characteristics, i.e., aqueous hydrogen peroxide solution, in order to improve the efficiency of sterilization of wet surfaces (Castberg et al, col.2, lines 34-38).

Response to Arguments

8. Applicant's arguments with respect to claims 2-6, 15, 17-18, and 21-27 have been considered but are moot in view of the new ground(s) of rejection.

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The DiGeronimo reference is applied to show that it is known to sterilize packaging material with the following steps: immersion in a hydrogen peroxide bath, removing substantially all of the hydrogen peroxide on the material by using air knives, and finally irradiating by using UV lamps. In addition, the specification only mentions microorganisms without providing any types or how such microorganisms would absorb hydrogen peroxide solution. The DiGeronimo reference recognizes that the surfaces of packaging material contain microorganisms as disclosed by the instantaneous claims. Thus, both microorganisms in the DiGeronimo reference and the instantaneous claims absorb liquid hydrogen peroxide. The same reasoning follows with regard to leaving residual amount of liquid hydrogen peroxide, since both the DiGeronimo reference and the instantaneous inventions use air knives.

Conclusion

9. The prior art made of record but not relied upon is considered pertinent to applicant's disclosure. Egger (U.S.P.N. 3,904,361) teaches percent weight ranges for the concentration of liquid hydrogen peroxide.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 8:30-5:00.
11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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